

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2022-2-E - ORDER NO. 2022-290

APRIL 28, 2022

IN RE:	Annual Review of Base Rates for Fuel Costs)	ORDER RULING ON
	for Dominion Energy South Carolina,)	FUEL ADJUSTMENT
	Incorporated (For Potential Increase or)	
	Decrease in Fuel Adjustment))	

I. INTRODUCTION

This Docket is a statutorily mandated annual review by the Public Service Commission of South Carolina (Commission) of the base rates for fuel costs of Dominion Energy South Carolina, Inc. (DESC), pursuant to Sections 58-27-865 and 58-39-140 of the South Carolina Code of Laws (2015). Section 58-27-865 requires the Commission to annually review the fuel purchasing practices and policies of DESC, and to determine if any adjustment to the utility's fuel cost recovery is reasonable. The period under review in this Docket is January 1, 2021, through December 31, 2021 (Review Period). Additionally, Section 58-39-140 requires the Commission to determine whether an increase or decrease in the fuel cost component designed to recover incremental or avoided costs of the utility is reasonable as part of the utility's implementation of the Distributed Energy Resource (DER) Program previously approved by the Commission.

DESC most recently filed a base rate application with the Commission on August 14, 2020, seeking approval to increase its rates and charges from the previously approved

base rates the Commission authorized in 2012. (*See* Docket No. 2020-125-E). On August 16, 2021, the Commission issued Order No. 2021-570, approving the base rates proposed in a comprehensive settlement agreement entered into among DESC, the Office of Regulatory Staff (ORS), and the intervening parties. The settlement agreement contained a proposed base rate lower than originally proposed by DESC's Application for a rate increase in that Docket. Furthermore, DESC agreed not to apply for a base rate increase for two (2) years, absent a defined exception. The Commission's Order provided:

DESC shall not file for a general rate case before July 1, 2023, such that new rates will not be effective prior to January 1, 2024, except where necessary due to unforeseen extraordinary economic or financial conditions which may include, but not be limited to, changes in tax rates. DESC shall fully document its reasoning, should it file a general rate case prior to July 1, 2023 under this exception.

Order No. 2021-570, p. 108, paragraph 24.

This Docket, 2022-2-E, in contrast to the base rate case resulting in Order No. 2021-570, is an annual review of the utility's annual fuel costs¹ as mandated by Sections 58-27-

¹ “ ‘Fuel cost’ also shall include the following variable environmental costs: (a) the cost of ammonia, lime, limestone, urea, dibasic acid and catalysts consumed in reducing or treating emissions, and (b) the cost of emission allowances, as used, including allowance for SO₂, NO_x, mercury, and particulates. Upon application of the utility, and after a hearing at which all interested parties may appear and present evidence, the commission may, if it determines such action to be just and reasonable, allow the variable costs of other environmental reagents, other environmental allowances or emissions-related taxes to be recovered as a component of fuel costs, but only to the extent these variable environmental costs are required to be incurred in relation to the consumption of fuel and the air emissions caused thereby. Alternatively, the commission may decide that the costs related to these other variable environmental costs may only be recovered through base rates established under Sections 58-27-860 and 58-27-870. All variable environmental costs included in fuel costs shall be recovered from each class of customers as a separate environmental component of the overall fuel factor. The specific environmental component for each class of customers shall be determined by allocating such variable environmental costs among customer classes based on the utility's South Carolina firm peak demand data from the prior year. Fuel costs must be reduced by the net proceeds of any sales of emission allowances by the utility. If capacity costs are permitted to be recovered through the fuel factor, such costs shall be allocated and recovered from customers under a separate capacity component of the

865 and 58-39-40 of the South Carolina Code of Laws. Thus, in this Docket, the Commission determines whether any adjustment to DESC's fuel cost recovery is necessary and reasonable due to DESC's fuel costs during the review period, January 1, 2021, to December 31, 2021. DESC shall not make a profit or return on its fuel cost recovery in this Docket. Rather, any adjustment deemed appropriate in an annual review is passed through by the company to customers on a dollar for dollar basis.

Based upon consideration of all the evidence in the record, we find the reliable, probative, and substantial evidence presented in this Docket supports a finding that DESC's fuel purchasing and plant management practices and policies were just and reasonable, and that DESC's calculations regarding its fuel costs are supported by the evidence and are just and reasonable. We conclude, as more fully set forth below, a fuel adjustment in this Docket is appropriate, just, reasonable, and supported by substantial evidence.

II. FACTS AND PROCEDURAL HISTORY

On October 13, 2021, the Clerk's Office of the Commission (Clerk) prepared a Notice of Filing and Public Hearing (Notice) to establish the annual review of DESC's base rates for fuel costs, opening Docket No. 2022-2-E and setting a hearing date of April 7, 2022. The Clerk also established a schedule for the filing of testimony and required DESC to publish the notice in newspapers and via bill inserts or electronic mail to

overall fuel factor based on the same method that is used by the utility to allocate and recover variable environmental costs. The incremental and avoided costs of distributed energy resource programs and net metering as authorized and approved under Chapters 39 and 40, Title 58 shall be allocated and recovered from customers under a separate distributed energy component of the overall fuel factor that shall be allocated and recovered based on the same method that is used by the utility to allocate and recover variable environmental costs." S.C. Code Ann. §58-27-865(A)(1) (2015).

customers. DESC complied with the requests, providing proof of the publications. The Clerk published an amended Notice on December 7, 2021, making a minor adjustment.

A number of entities intervened to join the proceeding. ORS filed a notice of appearance of counsel on October 18, 2021, as a party of record pursuant to Section 58-4-10 of the South Carolina Code of Laws (Supp. 2021). Moreover, the Commission granted petitions to intervene of Southern Alliance for Clean Energy (SACE) and South Carolina Coastal Conservation League (SCCCL), CMC Steel of South Carolina (CMC Steel), and the South Carolina Energy Users Committee (SCEUC). The Commission later excused CMC Steel from appearing at the hearing at CMC Steel's request. DESC, ORS, and SACE/SCCCL submitted the pre-filed testimony of their witnesses.

On Thursday, April 7, 2022, and Friday April 8, 2022, the Commission conducted a public hearing, with the Honorable Justin T. Williams, Chairman, presiding in the hearing room. On April 22, 2022, the Commission took action upon a motion to approve the adjustment of fuel costs.

III. APPLICABLE LAW

The Commission is statutorily imbued with the authority, upon petition, to “ascertain and fix just and reasonable standards, classifications, regulations, practices, or service to be furnished, imposed, observed, and followed by any or all electrical utilities.” S.C. Code Ann. § 58-27-810 (2015). “Every rate made, demanded or received by any electrical utility . . . shall be just and reasonable.” *Id.*

Section 58-27-865 defines fuel costs of an electrical utility company, including, but not limited to, “the cost of fuel, cost of fuel transportation, and fuel costs related to

purchased power.” S.C. Code Ann. § 58-27-865(A)(1) (2015). This Section goes on to address environmental costs, capacity costs, and the incremental and avoided costs of distributed energy resource programs and net metering. *Id.* The Commission determines each year whether the fuel costs are appropriate and adjusts for any over-recovery or under-recovery by the utility, as set forth in Section 58-27-865(B): “The commission shall direct each electrical utility which incurs fuel cost for the sale of electricity to submit to the Commission and to [ORS] . . . its estimates of fuel costs for the next twelve months.” S.C. Code Ann. § 58-27-865(B) (2015). The Commission is given the authority to hold a public hearing between the annual reviews “to determine whether an increase or decrease in the base rate amount designed to recover fuel cost should be granted.” *Id.*

Upon conducting public hearings in accordance with law, the commission shall direct each company to place in effect in its base rate an amount designed to recover, during the succeeding twelve months, the fuel costs determined by the commission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period.

Id.

Conversely, the Commission may deny recovery by the utility of fuel costs imprudently incurred:

The commission shall disallow recovery of any fuel costs that it finds without just cause to be the result of failure of the utility to make every reasonable effort to minimize fuel costs or any decision of the utility resulting in unreasonable fuel costs, giving due regard to reliability of service, economical generation mix, generating experience of comparable facilities, and minimization of the total cost of providing service.

S.C. Code Ann. § 58-27-865(F) (2015).

In addition, Section 58-39-140 establishes that the Commission determines whether the fuel cost recovery should include additional or avoided costs incurred by the utility to operate its DER Program.

Upon approval of a distributed energy resource program, the commission shall direct the electrical utility which incurs incremental or avoided costs to submit to the commission and to the Office of Regulatory Staff, within such time and in such form as the commission may designate, its estimates of incremental or avoided costs for the next twelve months. The commission may hold a public hearing at any time between the twelve-month reviews to determine whether an increase or decrease in the fuel cost component designed to recover incremental or avoided costs should be granted. Upon conducting public hearings in accordance with law, the commission shall direct the electrical utility to place in effect an amount designed to recover, during the succeeding twelve months, the incremental or avoided costs determined by the commission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period. This amount shall be a component of the fuel cost factor established under Section 58-27-865(A).

S.C. Code Ann. § 58-39-140 (B) (2015).

Section 58-40-20, regarding net energy metering, establishes: “[t]he value of the energy produced by customer-generators must be updated annually and the methodology revisited every five years.” S.C. Code Ann. § 58-40-20(E) (Supp. 2021). This annual update was addressed in Order No. 2021-569:

The Commission further finds that, to the extent this Order amends the calculation methodologies for the existing cost-benefit categories approved by Order No. 2015-194, it is appropriate to require that utilities use these updated

methodologies in determining the distributed energy component of their overall fuel factor in annual fuel proceedings under S.C. Code Ann. § 58-27-865(A) for purposes of determining the NEM DER Incentive cost recovery associated with existing customer-generators. S.C. Code Ann. Section 58-40-20[(E)] requires the value of energy produced by customer-generators to be updated annually, and the annual fuel proceedings is the logical proceeding to conduct that update. In addition, pursuant to S.C. Code Ann. Section 58-40-20(E), the NEM methodology must be revisited every five years.

Order No. 2021-569, p. 35.

IV. REVIEW OF EVIDENCE OF RECORD AND ANALYSIS

A. FUEL PURCHASING, ENVIRONMENTAL COSTS, PLANT OPERATIONS AND FUEL INVENTORY MANAGEMENT

DESC Witness George A. Lippard, III, testified regarding the operating performance of the V.C. Summer Nuclear Station during the review year, 2021. (Transcript, p. 10, lines 8-12). He asserted the “key focus areas” of the nuclear station are “safety, reliability, outage and work management, workforce development, and organizational effectiveness.” (*Id.*, lines 16-19). Lippard testified the nuclear station “performed well,” and met or exceeded “all NRC [Nuclear Regulatory Commission] requirements and INPO [Institute of Nuclear Power Operations] standards.” (*Id.*, lines 23-25). He noted “INPO rated V.C. Summer’s overall performance as exemplary, which is the highest achievable rating that a plant can receive;” and that “NRC reported that V.C. Summer operated in a manner that preserved public health and safety and fully met all cornerstone objectives.” (Transcript, p. 11, lines 1-8).

Lippard also testified regarding outages at the station. (Transcript, pp. 16.4-16.10). He relayed the plant had one unplanned outage and one planned outage. (Transcript, p. 16.4, lines 6-7, p. 16.5, line 3). The unplanned outage lasted three-days due to a valve actuator air leak in May of 2021. (Transcript, p. 16.4, lines 7-10). In addition, the plant underwent a planned outage for a scheduled refueling, which lasted approximately thirty-six and one-half days in October and November of 2021. (Transcript, p. 16.5, lines 4-13). During the outage, the company performed “over 6,000 tasks” of scheduled maintenance. (*Id.*, lines 17-21). However, upon returning to full power after the thirty-six and one-half day planned outage, the generator step-up transformer (GSU) failed. (Transcript, p. 16.7, lines 3-6). Witness Lippard testified that VCS’s main GSU experienced a significant failure on November 15, 2021, thus interrupting VCS’s planned return to service following refueling. (Transcript, p. 16.3 – p. 16.9). At the hearing, Witness Lippard testified that, regarding the testing and monitoring performed by DESC relating to the GSU, that there were no indications the GSU would or could fail, and stated that the investigation into the failure of the GSU is ongoing. (Transcript, p. 40, line 19 – p. 43, line 18). DESC ultimately utilized a spare GSU, but the repair took twenty-five days to complete. (Transcript, p. 16.8, lines 12-16, 19-20). Lippard stated DESC plans to purchase a new GSU and anticipates its installation in the fall of 2024. (Transcript, p.16.9, lines 3-9).

DESC Witness Henry E. Delk, Jr. testified to the “operating performance of [DESC’s] non-nuclear power generation units from January 1st, 2021, through December 31st, 2021” and South Carolina Generating Company’s (GENCO) A.M. Williams Electric Generating Station (Williams Station) during the Review Period. (Transcript, p. 18, lines

20-22). He testified regarding upgrades and maintenance projects, as well as discussed significant forced outages during the Review Period. (Transcript, p. 19, line 13-p. 21, line 19). More specifically, Delk shared details of the outages at Wateree Unit 2, Columbia Energy Center, and Urquhart Unit 6, noting in summary, “our non-nuclear power generation fleet has operated reliably and efficiently during the review period.” (Transcript, p. 20, line 2-p. 21, line 19, lines 20-22; pp. 23.3-23.4). After explaining these significant forced outages during the Review Period, including an update on the Wateree Unit 2 forced outage that began on February 19, 2020 (Transcript, p. 23.10), an outage at Columbia Energy Center due to the failure of the second circulating water pump on October 12, 2021 (Transcript, p. 23.10 – p. 23.12), and an outage at Urquhart Unit 6 caused by the mis-installation of liner caps by the Company’s contractor beginning on December 18, 2021 (Transcript, p. 23.12 – 23.14), Witness Delk continued to testify about DESC’s Fossil System Forced Outage Factor. Witness Delk stated that DESC’s fossil units experienced a system Forced Outage Factor of 7.47%. When Wateree Unit 2 is excluded from this calculation, the Forced Outage was 2.02%. (Transcript, p. 23.13, lines 8-10).

Witness Delk further testified regarding DESC’s monitoring and oversight of the outages at Columbia Energy Center and Urquhart Unit 6, as well as DESC’s efforts to restore the units to service. Following the forced outage at Columbia Energy Center, Delk outlined DESC’s actions: (a) replacing and realigning all water treatment chemical valves; (b) adding additional on-line water chemistry analyzers to immediately detect future chemistry excursions; and (c) ordering a spare circulating water pump to be stored on site. (Transcript, p. 23.10 – p. 23.12). With respect to the Urquhart Unit 6 outage, Witness Delk

testified that not only had the vendor accepted responsibility and covered the necessary repairs, but also that the Company proactively took a scheduled maintenance outage to make the necessary repairs to the unit. (Transcript, p. 21, lines 8-19; p. 23.12 – p. 23.13). Because of mild weather at the time of the outage, Urquhart 6 was not needed to serve base load, and would have been an intermediate facility; therefore, although the outage was extended by two weeks, there were no increased fuel costs to customers as a result of the outage (Transcript, p. 23.14 – p. 23.15; p. 30, lines 6-25; p. 37, line 8 – p. 39, line 18).

Witnesses Lippard and Delk testified on cross-examination that DESC would not object to ORS addressing any (over)/under-recovered balance caused by the outages at Wateree 2 and the failure of the GSU at V.C. Summer in next year’s fuel proceeding (Transcript, p. 25, lines 1-16; p. 26, lines 6-15). Lippard and Delk also stated that allowing ORS review and addressing the same in next year does adhere with historical practice in DESC fuel proceedings (*Id.*).

DESC Witness Rose M. Jackson testified regarding the following: “the natural gas purchasing process for DESC generation, . . . [the] natural gas prices for the review period of January 1st, 2021, through December 31st, 2021, . . . the outlook for natural gas prices in the near term.” (Transcript, p. 61, lines 5-10). Jackson explained the company has “industry standard contracts with more than 60 suppliers that have proven to be creditworthy and reliable.” (Transcript, p. 64.4, lines 13-14). Witness Jackson discussed the process by which DESC provides current market information to its Economic Resource Commitment Group for DESC’s electric generation plants to determine the most economical means of reliably meeting the electricity needs of customers. (Transcript, p.

61, lines 11-17; p. 64.3, line 20 – p. 64.4, line 10; p. 108, line 8 – p. 108, line 18). Witness Jackson testified that her department is directed to purchase natural gas supplies at the best available current market prices. (Transcript, p. 64.4, lines 6–10). Witness Jackson also described the Company’s gas contracts and purchasing practices and the tools DESC uses to accurately determine market-based prices for natural gas supplies DESC purchases. (Transcript, p. 64.5, lines 14-19). Witness Jackson discussed DESC’s natural gas transportation capacity and contracting practices, and the Company’s practices to maintain natural gas transportation capacity and to manage and minimize the costs of that capacity. (Transcript, p. 64.6 – p. 64.9). Based on DESC’s practices and efforts described in her testimony, Witness Jackson testified that DESC made diligent and prudent efforts to obtain reasonable market-based prices for the reliable supply of natural gas for electric generation and to procure the necessary capacity for the delivery of that supply during the Review Period.

As to natural gas prices during 2021, Witness Jackson testified the prices at the beginning of the year 2021 ranged from \$2.58 to \$3.22 per dekatherm, and then lowered to \$2.45 by the middle of March, 2021. (Transcript, p. 64.9, lines 9-13). However, she stated, prices rose through the spring and summer and reached a peak in October of \$6.31 per dekatherm. (*Id.*, lines 13-20). Jackson noted the prices fell again, ending the year 2021 at \$3.73 per dekatherm. (Transcript, p. 64.9, line 19-p. 64.10, line 1). Over the course of 2021, Jackson testified DESC paid \$335 million for gas “at an approximate average price of \$3.77 per Dt.” (Transcript, p. 64.10, lines 4-5).

Witness Jackson also testified regarding the issue of pipeline availability. (Transcript, p. 92, line 14-p. 98, line 2). She stated: “natural gas infrastructure will be key to supporting renewables, and it is key to the decarbonization of our system.” (Transcript, p. 96, lines 23-25). She continued: “So while everybody wants to focus on the supply piece, the infrastructure to move that supply . . . we need to be able to move that gas from the Marcellus region down to the Southeast where we desperately need it in order to continue to serve our customers reliably.” (Transcript p. 97, lines 16-21). Based on DESC’s practices and efforts described in her testimony, Witness Jackson testified that DESC made diligent and prudent efforts to obtain reasonable market-based prices for the reliable supply of natural gas for electric generation and to procure the necessary capacity for the delivery of that supply during the Review Period.

Witness Shinn testified on procurement and delivery activities for coal and No. 2 fuel oil used in non-nuclear power electric generation for DESC and GENCO’s Williams Station and the procurement and delivery of limestone for the Company’s scrubbers located at the Wateree and Williams Station steam plants, while focusing on the reliability of supply, conformity with operational environmental requirements, and obtaining reasonable prices.” (Transcript, p. 66, lines 12-17).

Shinn stated: “[i]n 2021, DESC consumed 1,891,851 tons of coal . . . 15% higher than the amount of coal consumed in 2020.” (Transcript, p. 71.4, lines 4-5). Witness Shinn described changes in the coal markets since DESC’s last annual fuel adjustment hearing and how those changes affected coal procurement for the Review Period. In 2021 for annual fuel cost review proceeding, Shinn testified, DESC “took delivery of 1,146,291 tons

of coal under long-term agreements and 612,369 tons through spot purchases during the Review Period.” (Transcript, p. 71.7, lines 3-4). He noted this was a 19% increase in deliveries from the year before, 2020. (*Id.*, line 9).

Witness Shinn described DESC fuel purchasing practices, the use of a mixture of spot and long-term contracts, decision-making process for use of spot versus long-term contracts, inventory management, transportation services management, and contracting procedures to secure the necessary quantities of coal and No. 2 fuel oil at competitive prices. (Transcript, p. 71.3 – p. 71.13). Of 2022, Witness Shinn stated: “DESC does not anticipate soliciting suppliers of coal for additional long-term contracts in 2022. The Company currently has contracts in place that are projected to meet a balance of 90% of coal supplies through long-term contracts and 10% through short-term contracts in 2022.” (Transcript p. 71.7, lines 17-20). Shinn also testified regarding 2022: “the Company expects coal prices will remain above the level seen in recent years until demand decreases or supply increases above demand. Current production is not adequate to meet near term demand.” (Transcript p. 71.17, lines 14-17).

Witness Shinn noted there had been transportation delays in the review period due to “an increased need for transportation services due to the economic emergence from the COVID-19 economic slowdown.” (Transcript p. 68, lines 13-17). He further testified that the rail delays of CSX Transportation, its primary rail transporter of coal, also stemmed from “a lack of qualified rail crews to move freight, and increased natural gas prices” (Transcript, p. 71.13, lines 3-4, 12-13).

Unlike coal contracts, Shinn stated the purchase of No. 2 fuel oil is usually “competitively solicited every two years.” (Transcript, p.71.6, lines 6-8). He noted the prices have ranged from \$18.52 to \$12.01 per MMBTU during 2021. (Transcript, p. 71.19, lines 9-11).

Shinn also testified DESC tries to purchase the product with the best price, whether gas or coal: “You know, whatever the cheapest form of generation is, that’s what we will economically try and use.” (Transcript, p. 88, lines 17-19). Shinn asserted: “the company made reasonable and prudent efforts to obtain reliable, high-quality supplies of coal, No. 2 fuel oil, lime, ammonia, limestone, and associated transportation at the lowest possible cost to DESC’s customers.” (Transcript, p. 69, line 23-p. 70, line 2). Witness Shinn testified as to DESC’s ongoing efforts to reduce fuel costs with purchasing coal, No. 2 fuel oil, and environmental reagents, including through evaluating availability of alternative supply sources and transportation arrangements. (Transcript, p. 71.13 – p. 71.21). Based on DESC’s practices and efforts described in his testimony, Witness Shinn testified that DESC made reasonable and prudent efforts to obtain and transport high quality supplies of coal, No. 2 fuel oil, and environmental reagents at the lowest possible cost to customers. (Transcript, p. 71.22, lines 4-9).

DESC Witness Tom A. Brookmire testified regarding the company’s nuclear fuel purchasing process for DESC generation and the prices for conversion services, enrichment services, and fuel fabrication for the Review Period and on the near-term outlook. (Transcript, p. 73, lines 16-18). Brookmire described how the Nuclear Fuel Procurement Group makes purchasing decisions for nuclear fuel founded on future planned fuel

requirements, discussed DESC's contracting practices relating to procurement of uranium, conversion services, enrichment and fabrication, management of its contracts and inventory, and DESC's efforts to monitor the nuclear fuel market on an ongoing basis and evaluate spot market opportunities to supplement long-term contract supplies as appropriate. (Transcript, p. 76.3 – p. 76.5, line 5).

Witness Brookmire discussed current market conditions for the “front-end” components of nuclear fuel, including market history such as the Fukushima disaster and current developments and trends bearing on national and international supply and demand. (Transcript, p. 76.5, line 9 – p. 76.7, line 23). Based on DESC's efforts and practices described in his testimony, Witness Brookmire testified that DESC made reasonable and prudent efforts to obtain market-based prices and reliable supply for its nuclear fuel requirements at VCS. (Transcript, p. 76.8, lines 4-8). He noted that DESC's contracts to purchase nuclear fuel are usually longer than two years, as opposed to short-term contracts. (Transcript, p. 76.4, lines 18-20). Witness Brookmire stated: “[a]s of January 2022, the spot price for uranium concentrates has more than doubled and term pricing is up about 35% since their respective low points in 2017.” (Transcript p. 76.6, lines 5-6). He noted “Kazakhstan remains the largest global uranium production source by far.” (*Id.* p. 76.6, lines 8-9). Of spot and term enrichment services, Brookmire testified: “market pricing hit a low point in mid-2018 and as of January 2022, spot prices are up about 65% and term prices are up about 50%.” (*Id.*, lines 20-21). Brookmire concluded his testimony noting Japan restarted three reactors in 2021, and that “China continues to have an aggressive nuclear energy program and continues to be a significant factor impacting supply and

demand for uranium as they do not have significant indigenous sources of uranium.” (Transcript, p. 76.7, lines 12-19). He also stated China has “52 reactors in operation, 17 plants under construction, and others in planning.” (*Id.*, lines 22-23).

ORS Witness Brandon S. Bickley testified about ORS’s recommendations resulting from ORS’s examination and review of the Company’s power plant operations used in the generation of electricity to meet the utility’s South Carolina retail customer requirements during the Review Period, and to ensure the Company efficiently operated its plants and made every reasonable effort to minimize fuel costs to provide reliable and high-quality service to its customers. (Transcript, p. 320, lines 16-21). Bickley discussed ORS’s analysis of DESC’s monthly fuel reports, power plant performance data, unit outages, heat rate data, and generation statistics. Witness Bickley also described ORS’s other monitoring activities relating to power plant operations, including industry and governmental publications, attending via virtual participation of the NRC’s 2020 Annual Assessment meeting for VCS, and interviews with Company personnel relating to DESC’s electric generation, power plant outages, and maintenance activities, and site visits. (Transcript, p. 323.3, lines 8-20). More specifically, Witness Bickley stated: “ORS reviewed the performance of DESC’s generation units to determine if the company made reasonable efforts to maximize unit availability and every reasonable effort to minimize fuel costs.” (Transcript, p. 323.4, lines 1-3). Bickley testified: “ORS found the outages that were reviewed to be reasonable based on ORS’s review of the outage data from the Actual Period, forecasted outage data from Docket No. 2021-2-E, historical outage data from previous annual fuel proceedings, and industry experience.” (Transcript p. 323.5, lines 8-

11). Furthermore, he noted, “ORS determined that the Company made reasonable efforts to maximize unit availability and every reasonable effort to minimize fuel costs.” (*Id.*, lines 22-23).

Witness Bickley discussed ORS’s review of the Company’s operating statistics by generating unit and ORS’s activities in reviewing all outages for the Review Period. (Transcript, p. 323.4, line 1 – p. 323.6, line 9). Witness Bickley indicated that ORS’s review of the Wateree 2 and VCS forced outages is ongoing and that ORS will review these outages during the Company’s next fuel proceeding wherein the outage is complete and/or the final reports are available. (Transcript, p. 323.4, line 9 – p. 323.5, line 18). Witness Bickley also testified regarding ORS’s review of the Company’s generation mix and plant-by-plant fuel costs during the Review Period, as well as ORS’s review of the Company’s forecasted power plant operations. (Transcript, p. 323.6, line 1 – p. 323.7, line 4). Witness Bickley further testified that “[b]ased on its review, ORS found the Company’s maintenance schedules and projected data for its power plants for the Estimated and Forecasted Periods to be reasonable.” (Transcript, p. 323.7, lines 2-4). ORS did not recommend any adjustments to DESC’s Fuel Factors. (*Id.*, lines 7-8).

Witness Michael L. Seaman-Huynh testified regarding “ORS’s findings and recommendations resulting from our examination of Dominion Energy South Carolina’s fuel expenses used in the generation of electricity to meet its South Carolina retail customer requirements.” (Transcript, p. 326, lines 3-7). Seaman-Huynh described ORS’s examination of DESC documents and reports, as well as the meetings ORS undertook with DESC personnel. (Transcript, p. 326, line 8-p. 327, line 1). Witness Seaman-Huynh also

explained he reviewed DESC's "fuel procurement and forecasting policies, procedures, and activities to ensure the Company made every reasonable effort to minimize fuel costs so as to provide reliable and high-quality service to its customers." (Transcript p. 328.2, lines 15-18). Witness Seaman-Huynh described the additional steps taken by ORS in its review including interviews with Company personnel relating to fuel procurement, transportation, environmental compliance costs and procedures, emissions, forecasting, and DESC policies and procedures pertaining to fuel procurement, in addition to monitoring related industry and governmental publications and conducting site visits. (Transcript, p. 328.3, lines 10-17).

When asked for the "primary drivers" behind DESC's request for an increase in rates in this Docket, Seaman-Huynh stated: "The Company's request for an increase is driven by the projected fuel cost under-recovery as of April 2022 and increasing commodity prices in the Forecasted Period as discussed in detail in the Company's Direct Testimony." (Transcript, p. 328.5, lines 14-16).

ORS concurs with the request by DESC to apply the sixty-one million dollars Toshiba settlement proceeds to reduce the under-collected balance in base fuel. (Transcript, p. 328.5, line 20 - p. 328.6, line 6). Similarly, Witness Seaman-Huynh supports the same application with the proceeds DESC received from the Westinghouse bankruptcy proceedings. (Transcript p. 328.6, lines 10-18).

Seaman-Huynh's testimony indicated the result of the increase will impact the average residential customer's monthly bill by 5.16%, raising it from \$125.92 to \$132.42. (Transcript, p. 328.7, lines 17-20). Seaman-Huynh also recommended DESC provide a

quarterly forecast of its expected fuel factors to all interested parties. (Transcript p. 328.8, lines 1-10).

No other parties presented testimony related to DESC's fuel purchasing practices, power plant operations, or fuel inventory management. Based upon the evidence and testimony of the witnesses, the Commission finds DESC's fuel purchasing practices and policies, environmental costs, power plant operations, and fuel inventory management during the Review Period are just and reasonable.

B. NET ENERGY METERING METHODOLOGY

The Commission has determined and approved the following eleven (11) components of value for NEM Distributed Energy Resources (NEM Value Stack), as set forth in Order No. 2015-194 and modified by Order No. 2021-569:

1. +/- Avoided Energy
2. +/- Avoided Capacity
3. +/- Ancillary Services
4. +/- T&D Capacity
5. +/- Avoided Criteria Pollutants
6. +/- Avoided CO₂ Emission Cost
7. +/- Fuel Hedge
8. +/- Utility Integration & Interconnection Costs
9. +/- Utility Administration Costs
10. +/- Environmental Costs
11. +/- Line Losses
- 12. = Total Value of NEM Distributed Energy Resources**

DESC Witness James W. Neely testified regarding the eleven (11) components of value for the distributed energy resource avoided cost. (Transcript, p. 140, lines 11-16). In his testimony, Neely stated that DESC's calculations comply with the requirements established by the Commission in Order No. 2015-194. He summarized the values

calculated by DESC for each category. (Transcript, p. 141, line 6-p. 144, line 13). Neely also provided Table 2 in his direct testimony, which sets forth the proposed updated values DESC calculated for each component, resulting in a total value of NEM Distributed Energy Resources of \$0.03093/kWh in the current period, and a total value of \$0.04248/kWh as a twenty-year levelized value. (Transcript, p. 145.8, line 3).

Table 2
Total Value of NEM Distributed Energy Resources (\$/kWh)
Proposed Values

	Current Period (\$/kWh)	20-Year Levelized (\$/kWh)	Components
1	\$0.03024	\$0.03878	Avoided Energy Costs
2	\$0.00000	\$0.00034	Avoided Capacity Costs
3	\$0.00000	\$0.00000	Ancillary Services
4	\$0.00000	\$0.001838	T & D Capacity
5	\$0.0000004	\$0.0000002	Avoided Criteria Pollutants
6	\$0.00000	\$0.00000	Avoided CO ₂ Emission Cost
7	\$0.00000	\$0.00000	Fuel Hedge
8	(\$0.00180)	(\$0.00180)	Utility Integration & Interconnection Costs
9	\$0.00000	\$0.00000	Utility Administration Costs
10	\$0.00015	\$0.00011	Environmental Costs
11	\$0.02860	\$0.03928	Subtotal
12	\$0.00234	\$0.003208	Line Losses @ 0.9245
13	\$0.03093	\$0.04248	Total Value of NEM Distributed Energy Resources

Thereafter, Neely provided detailed explanation of the calculations for each component, and Neely noted that the calculations comply with Commission Order Nos. 2015-194 and 2021-569, and Neely joined in asking the Commission to approve the calculations. (Transcript, p. 145.8, line 4-145.19, line 7). Witness Neely further explained DESC's

evaluation of each component and its associated value (identified here by reference to the line numbers in Table 2 above (Transcript, p. 145.6, line 4 – p. 145.16, line 5) as follows:

LINE 1: DESC based its calculation of avoided energy costs on its PURPA avoided cost values, except that it removes and separately states the cost of criteria pollutants and environmental cost components in components of value on lines 5 and 10 in accordance with the methodology set forth in Commission Order No. 2015-194.

LINE 2: DESC determined this component of value is zero for the current period, as no capacity needs will be present until 2028. Consistent with Order No. 2021-569, the component of value for the 20-year planning horizon is set to \$0.00034 per kWh.

LINE 3: DESC determined this component of value is zero but addressed certain non-zero costs under the integration costs in line 8.

LINE 4: DESC determined that its NEM distributed resources will not avoid any transmission or distribution (T&D) capacity for the current period and, as a result, that the value of this category is zero. The value calculated by the Company for the 20-year planning horizon is \$0.001838 per kWh. Pursuant to Order No. 2021-569, DESC filed its plan for improving its data capabilities over time to improve the insight into the T&D systems and to modernize the planning of T&D assets to account for the ability of DERs to avoid or defer traditional, utility-owned T&D capital investments (T&D Plan). This T&D Plan was filed with the Commission in Docket No. 2021-182-E on November 17, 2021.

LINE 5: DESC determined that there is a positive avoided costs value of NO₂ and SO₂, which it removed from the avoided energy costs category and stated separately here in accordance with Commission Order No. 2015-194.

LINE 6: In Order No. 2015-194, the Commission stated that this component of value is set to zero until such time as federal or state laws or regulations yield an avoidable cost for CO₂ emissions. DESC determined that the value of this category is zero because there presently are no such federal or state laws or regulations.

LINE 7: As DESC does not hedge fuels for electric generation, the value for this component is zero.

LINE 8: This component of value was set to \$1.80/MWh pursuant to the Commission Directive issued in Docket No. 2021-88-E on November 16, 2021.

LINE 9: Because the administration costs of NEM Distributed Energy Resources are collected through a DER rider added to the fuel clause, the value of this component is zero.

LINE 10: As noted above, environmental costs have been separated from avoided energy costs and set forth here in accordance with the methodology from Commission Order No. 2015- 194.

LINE 11: Line 11 is a subtotal of the preceding amounts from lines 1-10.

LINE 12: This category represents the cumulative marginal line losses experienced at a residential customer's meter. In Order No. 2021-569, the Commission directed those utilities who did not yet have marginal line loss data to submit a plan addressing the development of the required data. DESC addresses marginal line losses in their T&D Plan submitted to the Commission on November 17, 2021.

LINE 13: Line 13 is the total value of NEM Distributed Energy Resources.

Neely noted SACE/SCCCL Witness Beach, who opposed a number of the DESC value components, did not disagree with all of DESC's calculations: "Witness Beach does not challenge the company's current-year or 20-year levelized values for the components of avoided energy costs, ancillary services, avoided criteria pollutants, utility administration costs, and environmental costs in the distributed energy resources value stack." (Transcript, p. 147, lines 11-16).

In opposition to the calculations of DESC, which are also confirmed by ORS and its witnesses, SACE/SCCCL Witness R. Thomas Beach, a consultant for Crossborder Energy, testified he believed "DESC significantly undervalues certain values of distributed solar, such as the avoided capacity costs for generation, transmission, and distribution." (Transcript p. 302.1, lines 4-5, p. 302.4, lines 6-8). He further contended DESC "fails to recognize the increasingly important value of distributed renewables as a hedge against rising fossil fuel prices and the risks of carbon and methane emissions from burning those

fuels.” (*Id.*, lines 8-10). Beach asserted “all benefits of DERs adopted in Order No. 2015-194 are quantifiable and that, in the event there is uncertainty about the magnitude of a specific benefit or cost, the default should not be to assign a zero value to that benefit or cost,” but to establish a reasonable value” for that amount. (*Id.*, lines 14-19). Beach recommended changes to the components DESC calculated. (Transcript, p. 302.5, line 3-p. 302.6, line 10). Beach provided Table 4 in his direct testimony to provide the Commission with the values he contends are accurate. (Transcript p. 302.34, line 7). Beach’s Table 4:

Table 4: Recommended Total Value of NEM Distributed Energy Resources

	Current Period (\$/kWh)	20-Year Levelized (\$/kWh)	Components
1	\$0.0302	\$0.0388	Avoided Energy Costs
2	\$0.0322	\$0.0322	Avoided Capacity Costs
3	\$0.00000	\$0.00000	Ancillary Services
4	\$0.0257	\$0.0297	T & D Capacity
5	\$0.0000004	\$0.0000002	Avoided Criteria Pollutants
6	\$0.0000	\$0.0046	Avoided CO ₂ Emission Cost
7	\$0.0020	\$0.0221	Fuel Hedge
8	(\$0.0009)	(\$0.0009)	Utility Integration & Interconnection Costs
9	\$0.00000	\$0.00000	Utility Administration Costs
10	\$0.0002	\$0.0001	Environmental Costs
11	\$0.0112	\$0.0141	Avoided Line Losses
12	\$0.1005	\$0.1406	Total Value of NEM DERs

Id. Witness Beach recommended a value of \$0.1005 per kWh for the current period, and a value of \$0.1406 per kWh for the 20-year levelized period, as outlined in Table ES-1 of Witness Beach’s prefiled direct testimony and shown below:

Table ES-1: Recommended Total Value of NEM Distributed Energy Resources

	Current Period (\$/kWh)	20-Year Levelized (\$/kWh)	Components
1	\$0.0302	\$0.0388	Avoided Energy Costs
2	\$0.0322	\$0.03217	Avoided Capacity Costs
3	\$0.00000	\$0.00000	Ancillary Services
4	\$0.0257	\$0.02970	T & D Capacity
5	\$0.0000004	\$0.0000002	Avoided Criteria Pollutants
6	\$0.00000	\$0.00463	Avoided CO ₂ Emission Cost
7	\$0.0020	\$0.0221	Fuel Hedge
8	(\$0.0009)	(\$0.0009)	Utility Integration & Interconnection Costs
9	\$0.00000	\$0.00000	Utility Administration Costs
10	\$0.00015	\$0.00011	Environmental Costs
11	\$0.0112	\$0.0141	Avoided Line Losses
12	\$0.1005	\$0.1406	Total Value of NEM DERs

(Transcript p. 302.6, line 15). Witness Beach contended “[t]he costs of integrating DERs should be reduced in recognition that only a portion of DER output is exported to the grid.”

(Transcript, p. 302.6, lines 5-6). Neely disagreed: “For any exported power, power in excess of that used by the customer, the full integrated cost will be applied. For energy used by the customer, zero integrated cost will be applied.” (Transcript, p. 153.9, lines 16-18). DESC Witness Neely found errors and asserted in his testimony that Witness Beach’s calculations:

In this docket, [Beach] calculated two values: a 45 percent and a 7.9 percent contribution — capacity contribution from distributed energy resources. The 7.9 percent was based on the current configuration of the system. The 45 percent was based on the system before — you know, when the first megawatt of resources was added, which happened . . . a long time ago. So — and then he averaged those two values to come up with a 26 percent contribution.

(Transcript, p. 225, line 18-p. 226, line 3). Neely further testified: “[Beach] used the wrong system avoided cost.” (Transcript, p. 226, line 9). “I calculated using the difference in

revenue requirements method, a value of \$87.73 per kW-year. [Beach] ignored that calculation and just grabbed the carrying charges on a peaking turbine, which is \$180 a kW-year, more than double the value for our system” (*Id.*, lines 14-19). Witness Neely further testified:

Using an average of the value of the first MW with the last MW artificially inflates the current value. The first MW added to the system occurred years ago. The capacity value should be based on the current configuration of the system and represent the current avoided capacity value.

(Transcript, p. 153.4, lines 13-15).

Witness Beach disagreed with Neely’s calculation of the avoided cost component for generation capacity: “Witness Neely’s use of 8760 hours in the denominator mistakenly assumes that a solar unit operates at full nameplate capacity in all hours of the year.” (Transcript p. 302.20, lines 14-16). Witness Beach asserted Neely did not explain his estimates for DESC’s transmission and distribution costs. (Transcript, p. 302.24, line 13-16). Beach specifically disagreed with DESC’s methodology for calculating Avoided Energy Costs and recommended different valuations for the Avoided Capacity Costs, T&D Capacity, Avoided CO₂ Emission Cost, Fuel Hedge, Utility Integration & Interconnection Costs, and Avoided Line Losses components of the NEM Value Stack. We shall address each area of disagreement below:

1. *Avoided Energy Costs*

Witness Neely testified that DESC’s avoided energy costs are based on PURPA avoided cost values adjusted to remove the cost of criteria pollutants and environmental costs, which are broken out separately in the NEM Value Stack. (Transcript, p. 145.8, line

6 – p. 145.9, line 2). Witness Neely testified that DESC updated its avoided energy costs to include a 20-year levelized calculation as required by Order No. 2021-569. (*Id.*).

Witness Beach took issue with DESC’s avoided energy calculations, stating: “The Commission has issued a directive order in Docket No. 2021-88-E concerning revisions to DESC’s PR-1 and PR (Standard Offer) avoided cost rate schedules that would adopt avoided energy costs for these schedules based on 11 seasonal and time-of-use (TOU) periods, on a technology-neutral basis.” (Transcript p. 302.12, lines 7-10). Beach stated these differentiations of avoided energy costs could be applied to the costs in this Docket. (*Id.*, lines 10-12).

In rebuttal, Witness Neely clarified Beach “does not challenge the Company’s Current Year or 20-Year Levelized values for [] Avoided Energy Costs.” (Transcript, p. 153.2, lines 16-17). However, Neely contended: “The Commission should note that, despite his claim, Witness Beach ultimately did not contest DESC’s calculated value of avoided energy cost for the current period or the 20-year levelized period. Therefore, Witness Beach’s claims have no impact on the calculation of the avoided energy cost component.” (Transcript, p. 148, lines 3-8). As to Beach’s assertion avoided energy costs should be analyzed by season and time, Neely contends DESC’s avoided energy costs are “sufficient and comply with existing methodology for Act 236 purposes.” (*Id.*, lines 17-18). Neely further noted DESC is currently undergoing a study of that data, which will be helpful in the future:

The Company has delayed implementing the temporal and seasonal data because the periods for avoided energy costs should be synced with the temporal and seasonal periods for T&D avoided cost as described in the Company’s T&D

Narrative and Marginal Line Loss Plan filed on November 17, 2021, in Docket No. 2019-182-E. The development of the T&D Narrative and Marginal Line Loss Plan being undertaken by the Company will not be completed until the end of 2022.

(Transcript, p. 153.3, line 19-p. 153.4, line 4).

Witness Beach also testified he specifically disagreed with DESC's calculation of avoided capacity costs and found "several significant issues" with DESC Witness Neely's approach to the calculation. (Transcript p. 302.13, line 17-p. 302.14, line 6). More specifically, Beach contends "Neely's calculation of the capacity contribution of solar, each day of the year has the same weight as every other day. In reality, system loads vary significantly from day to day and season to season, and capacity typically has significant value only on those days with the highest loads." (Transcript, p. 302.13, lines 17-20). Witness Beach testified he "developed a non-zero Peak Capacity Allocation Factor (PCAF) for each hour of each year in which the load exceeds 90% of the maximum hourly load for that year." (Transcript p. 302.14, line 21-p. 302.15, line 1).

Witness Neely further responds that DESC has delayed implementing the temporal and seasonal data for avoided energy costs in order to sync with the temporal and seasonal period for T&D avoided cost as described in DESC's T&D Plan, which the Company submitted to the Commission in accordance with Order No. 2021-569 on November 17, 2021. (Transcript, p. 153.3, line 14 – p. 153.4, line 8).

Witness Beach does not dispute DESC's calculation of the Avoided Energy Cost component. The Commission concludes that DESC's Avoided Energy Cost component calculation is reasonable and appropriate for the Review Period based on the evidence

contained in the record. We further conclude that DESC's rationale for delaying implementing the temporal and seasonal data for avoided energy costs in order to sync with the temporal and seasonal period for T&D avoided cost as described in the Company's T&D Plan is reasonable.

2. *Avoided Capacity Costs*

DESC Witness Neely testified that DESC calculated "the previous year's solar generation, previous year's net load profile, and best estimates of the current value of avoided capacity on the DESC system." (*Id.*, lines 17-18). He added: "DESC's calculation of 3.423% capacity contribution recognized the real but relatively small impact that DER solar provides relative to DESC's capacity needs on an annual basis." (Transcript, p. 153.4, line 19-p. 153.5, line 2). Witness Neely contends "there is no capacity to be avoided" in 2022; "there is not capacity to be avoided until 2028 when it is assumed that 1,294 MW of coal generation is retired; and "a value of \$87.73 per kW-year" for the twenty-year period is accurate. (Transcript, p. 153.5, lines 11-16). Neely noted replacing retired units with new ones should not be a part of calculating avoided capacity. (Transcript, p. 153.5, line 20). He stated: "The avoided capacity calculation is based on needed capacity. And so if there's not any needed capacity, there's no additional avoided capacity cost." (Transcript, p. 195, lines 10-12). "There was no capacity need before the CT plan. After the CT plan is executed, there won't be an additional capacity needed. So it's not appropriate to add any avoided capacity megawatts for the CT plan." (Transcript, p. 197, lines 11-14).

Neely also testified the Company has determined this component of value is zero for the current period because no capacity needs will be present until 2028. Consistent with

Order No. 2021-569, the component of value for the 20-year planning horizon is set to \$0.00034 per kWh as calculated according to the hourly usage methodology prescribed in Order No. 2021- 569. (Transcript, p. 145.9 – p. 145.10). With regard to avoided capacity, Witness Neely testified Beach’s assessment is in error:

Witness Beach miscalculates the avoided generation capacity cost component for both the current period and the 20-year period. He does so because there is no capacity to be avoided in the current period. In fact, there’s no capacity to be avoided until 2028 when it is assumed that 1,294 megawatts of coal generation is retired.

(Transcript, p. 148, line 21-p. 149, line 2). Furthermore, Neely disagrees with Beach’s assertion the replacement of combustion turbine units impacts avoided capacity: “These units should not be used in the calculation because these units are in-kind replacements that are not intended to provide additional capacities. These units have critical and reliability functions that customer-generators cannot replace. Second, these replacement units are not avoidable.” (Transcripts, p. 149, lines 9-15).

Witness Beach contends “[e]xisting solar DERs allow DESC to avoid capacity costs for new generation at a level equal to 26.5% of the solar nameplate capacity.” (Transcript, p. 302.5, lines 7-8). He asserted “DESC’s avoided generation capacity costs should be \$180.61 per kW-year, in recognition that the utility has an immediate need for new capacity to replace retiring units.” (*Id.*, lines 9-11). Witness Beach disagreed DESC’s avoided generation capacity is zero, asserting DESC needs new capacity “as early as 2023—it does not matter whether this need is due to load growth or, as in this case, plant retirements.” (Transcript p. 302.18, lines 10-12).

In addition, Beach disagreed with Neely regarding the solar capacity contribution on net loads. (Transcript p. 302.17, lines 1-3). Witness Beach stated:

The solar capacity contribution of 45% based on gross loads in essence represents the capacity contribution of the first MW of existing distributed solar added to the system; the capacity contribution of 7.9% based on net loads represents the capacity contribution of the last MW of existing distributed solar added. The task here is to capture the average capacity contribution of all existing distributed solar resources, which have been added to the DESC system over time. A reasonable way to capture this average capacity contribution is to use a compromise between the two approaches based on the average of the results of the two methods using gross and net loads, as a measure of the average capacity contribution of the existing distributed solar resources on the DESC system. This average is 26.5% of solar nameplate.

(*Id.*, lines 5-14). Based on this, Beach recommended “that 26.5% of a solar PV project’s capacity may be assumed to contribute to meeting DESC’s capacity needs in its peak load hours.” (*Id.*, lines 15-16).

Witness Beach also testified that DESC’s calculation of avoided capacity cost improperly weighs the capacity contribution of solar equally across all days of the year and gives undue preference to utility-scale solar, in effect assuming it was deployed first. (Transcript, p. 302.16 – p. 302.17). Witness Beach calculated a capacity contribution of 26.5% of nameplate solar capacity based on an average of the gross loads and net loads methodologies. (Transcript, p. 302.15 – p. 302.17). Witness Neely responds that using an average of the value of the first MW with the last MW artificially inflates the current value because the first MW was added to the system years ago. (Transcript, p. 154.4). Witness Neely also notes that the Commission previously rejected Witness Beach’s proposed

methodology in DESC's prior fuel proceeding as well as in Docket No. 2019- 182-E. (Transcript, p. 154.5). In addition, Witness Neely testifies that Witness Beach improperly includes planned replacements of aging combustion turbine ("CT") units in his avoided capacity value calculation because these replacements are not intended to add additional capacity and are not avoidable by solar generation due to their critical and reliability functions that NEM DER solar cannot replace. (Transcript, p. 154.5 – p. 154.6).

Based upon the evidence of record, the Commission agrees with Witness Neely and rejects Witness Beach's proposed avoided capacity calculation methodology. Witness Beach has not presented evidence or analysis to warrant that this Commission change its methodology or for the Commission to find that DESC did not comply with the established methodology. Witness Neely's avoided capacity calculations are consistent with the requirement of Order No. 2021-569 to use an estimate of the hourly usage profile based on historic usage profiles. The Commission agrees with the avoided capacity values calculated by DESC.

3. *Avoided Transmission and Distribution Costs*

DESC determined that its NEM distributed resources will not avoid any transmission or distribution capacity for the current period because there has been no load growth, and, as a result, the value of this category is zero. (Transcript, p. 145.11; p. 154.8). The value calculated by the Company for the 20-year planning horizon is \$0.001838 per kWh. (Transcript, p. 145.11 – p. 145.12). However, pursuant to Order No. 2021-569, DESC filed its T&D Plan for improving its data capabilities over time to improve the insight into the transmission and distribution systems, and to modernize the planning of

transmission and distribution assets to account for the ability of DERs to avoid or defer traditional, utility-owned T&D capital investments. (Transcript, p. 145.12 – p. 145.13).

Witness Beach argued DESC transmission and distribution costs were arbitrarily calculated. (Transcript, p. 298, pp. 302.24-302.25). Beach asserts: “DESC’s avoided transmission and distribution (T&D) capacity costs are \$56.70 per kW-year for transmission and \$88.10 per kW-year for distribution. These avoided costs for T&D capacity costs are calculated using the NERA regression method that determines the long-term relationship between DESC’s T&D investments and its peak demands.” (Transcript, p. 302.5, lines 12-16). Neely rebuts this testimony, asserting DESC “identified the average annual T&D costs in the 5-year budget that could be avoided and used these values to calculate [T&D] avoided cost.” (Transcript, p. 153.7, lines 11-13).

Witness Beach stated: “Based on an analysis of DESC’s loads at its transmission and distribution substations, distributed solar avoids T&D capacity costs equal to 29% of the solar nameplate for transmission and 31% for distribution.” (*Id.*, lines 17-19). Neely counters that “[t]he T&D avoided cost is included as a \$/kWh value in the NEM calculation which allows the NEM DER calculation to be assigned a credit for T&D avoided cost in every hour that customers generate.” (Transcript, p. 153.8, lines 4-6).

Regarding the issues of transmission and distribution costs, Witness Neely also disagreed with Witness Beach, asserting Beach’s calculation “results in a significantly higher estimate of avoided T&D costs that are overstated because he includes costs in his calculation that are not related to load growth and are not avoidable by distributed energy resources.” (Transcript, p. 150, lines 10-14). In rebutting Beach’s calculations of T & D

costs, Witness Neely stated Beach used “all transmission costs between 2009 and 2020 from FERC Form 1 and again all costs from the T&D investment growth plan from 2021-2025. These costs include costs not related to load growth, but include safety, grid hardening and modernization, lifecycle replacement and repair.” (Transcript, p. 153.6, lines 14-17). Thus, Neely asserts, Beach’s calculations are in error and “result[] in a significantly higher estimate of avoided costs.” (Transcript, p. 153.7, lines 1-2).

Witness Neely testified that DESC accurately segmented its T&D costs by function and testified that Witness Beach’s analysis inappropriately captures costs used for reliability, which are not avoidable, with those that are due to load growth. (Transcript, p. 154.6 – p.154.7). Witness Neely also points out that the Company’s T&D Plan filed in response to Order No. 2021-569 addresses the process by which DESC will arrive at its methodology for assigning transmission and distribution values for the current period in future fuel proceedings. DESC provided testimony that it used best efforts and practices in calculating a zero value for this component. The Commission finds that DESC used best efforts to make this determination, and has provided sufficient justification for the zero value in its discussion of data development in its T&D Plan. The Commission rejects Witness Beach’s calculation because he does not limit his analysis only to T&D costs involving load growth. The Company’s calculations in this proceeding are reasonable and consistent with the Commission’s established methodologies at this time.

4. *Avoided CO₂ Emission Cost*

DESC determined a zero value for CO₂ pollutants. Witness Neely testified that Order No. 2015-194 set the component value for avoided CO₂ at zero until state or federal

laws or regulations result in an avoidable cost on utility systems for these emissions and, at present, there are no such state or federal laws or regulations restricting CO₂ pollutant emissions. (Transcript, p. 145.14, lines 3-7). Witness Beach provided testimony on the requirements of the Energy Freedom Act in South Carolina, particularly the need for utilities to consider environmental regulations in planning their resource portfolios (Transcript, p. 302.26, lines 8-10). In turning to the Company's 2021 IRP Update, Witness Beach looks to the mid-range carbon cost scenario included in the Company's update to calculate an avoided carbon benefit of \$0.0046 per kWh on a 20-year levelized basis (Transcript, p. 302.27, lines 8-15).

In rebuttal, Witness Neely stated that Witness Beach's assumptions violated Order Nos. 2015-194 and 2021-569 in the absence of any state or federal laws or regulations restricting the emission of CO₂ pollutants.

We find that a zero value for environmental costs is reasonable and appropriate. As Witness Neely testified, Order No. 2015-194 requires the use of a zero value until such time as federal or state statutory or regulatory requirements impose a cost in this regard. This requirement was not modified by Order No. 2021-569. Witness Beach's analysis and calculations therefore conflict with the carbon costs contemplated by Order No. 2015-194. Consequently, because Witness Beach's analysis does not consider the actual values in effect at the time of this proceeding, his calculation is flawed and must be rejected. The Commission also rejects Witness Beach's recommendation to factor avoided CO₂ emissions into his qualitative analysis.

5. Fuel Hedge

Witness Neely testified that because DESC does not hedge fuels for electric generation, the value of this component was rightfully zero. (Transcript, p. 145.14, lines 10-11). Witness Beach asserted: “Distributed renewable generation provides a long-term physical hedge against volatility in natural gas prices. This fuel hedge value can be quantified using a method developed for the Maine Public Utilities Commission. Recognizing this value is particularly important given the recent spikes in fossil fuel prices.” (Transcript, p. 302.6, lines 1-4).

Witness Neely stated in opposition, “DESC does not hedge fuels for electric generation. Therefore, the cost and the value for fuel hedging is zero.” (Transcript, p. 153.9, lines 6-7). He added: “fuel diversity does not constitute a fuel hedging program. As the Commission found in Order No. 2021-296(A): ‘a zero value for hedging is reasonable and appropriate. The Company does not hedge its fuel costs and, thus, the cost for this category would be zero.’ ” (*Id.*, lines 9-12). “We don’t have any costs associated with hedging fuels for generation, and so, if there’s no cost, there’s no cost to be avoided.” (Transcript, p. 212, lines 11-13). Witness Neely also clarified hedging has costs:

Now, fuel hedging does remove the volatility of the pricing, but it doesn’t reduce the cost. I mean, it can function — depends on how it’s designed, but it can function to limit the cost within a band, which means if prices drop, like they have been for the last decade, you wouldn’t have had the benefit of those low prices. It also limits the high prices. So it keeps you within a band. That’s typically how it works. It takes away the volatility.

(Transcript, p. 224, lines 2-10).

DESC Witness Jackson testified DESC did not have a “financial hedging program for generation.” (Transcript, p. 119, lines 4-5). She noted: “I just want to remind the Commission that a financial hedging program does not enable the company to beat the current market prices; it’s designed to reduce volatility overall. And one of the reasons that our gas distribution company hedging program was suspended was the cost associated with maintaining that program.” (*Id.*, lines 14-20).

The Commission finds that a zero value for hedging is reasonable and appropriate. As supported by the evidence, DESC does not financially hedge its fuel costs and, therefore, the cost for this category would be zero in accordance with Order Nos. 2021-569 and 2021-296(A). As such, the methodology recommended by Witness Beach using the Maine Distributed Solar Valuation Study is not appropriate for consideration in this proceeding. Moreover, the Commission finds that the physical fuel hedging is not equivalent to financial fuel hedging. The Commission finds that the fuel hedging component in the NEM Value Stack applies when a utility utilizes financial hedging but not physical hedging.

6. Utility Integration & Interconnection Costs

Witness Neely testified that the component of value for the integration charge is set to \$0.0018 per kWh pursuant to the Commission’s Directive in Docket No. 2021-88-E. (Transcript, p. 145.14, lines 15-16). These integration costs are only applied to exported power for customer-sited DER based on Order No. 2021-569. Witness Neely additionally stated that integration costs for DER should focus more on any distribution-system related impacts (Transcript, p. 145.14, line 17 – p. 145.15, line 1). Notably, Witness Beach accepts

the \$0.0018 per kWh calculated by the Company; however, he suggests that DESC applied this cost component beyond the power exported by solar customers, contrary to Order No. 2021-569 (Transcript, p. 302.32, lines 4-6).

In rebuttal, Witness Neely testified that for any exported power, the full integrated cost will be applied for power in excess of what is used by the customer, whereas zero integrated cost will be applied for energy used by the customer. (Transcript, p. 154.9, lines 16-18). As such, the cost of integrating DER should not be reduced. We agree with the value assigned to this component by DESC, as it comports with the Directive issued in Docket No. 2021-88-E on November 16, 2021.

7. *Avoided Line Losses*

Witness Neely noted "[o]nly about 2 percent of our customers are distributed energy resource — or have rooftop solar, is probably the easy way to describe it." (Transcript, p. 240, lines 4-6). In summarizing the result of using Beach's calculations, DESC Witness Neely testified:

Well, the regular customers' bills would go up if we use his method, because he — for his 20 — or his long term, 20-year distributed energy resource number that he calculates, it's higher than our retail rate — which is very baffling how avoided cost could be higher than our retail rate, but that's what he calculates. And so, currently, we credit these distributed energy resources at their retail rate. If we — if we adopted his methodology, we'd be crediting them at higher than their retail rate, and so all of the rest of our customers would have to be — have to make up that difference between the retail rate and this new rate that Beach calculated.

(Transcript, p. 238, line 25-p. 239, line 11).

The Commission finds that DESC's calculations of line losses are reasonable and appropriate. DESC does not assign a zero value, and there is no evidence in the record to suggest that DESC is not using best practices in its calculations of this component. It is noted that Witness Beach acknowledged that DESC developed a detailed study plan to determine the marginal line losses associated with customer-generator facilities as required by this Commission in Order No. 2021-569. The Commission rejects Witness Beach's recommended changes to DESC's calculation of avoided line losses.

The Commission further finds that DESC's recommendations for the value of NEM Distributed Energy Resources are reasonable and appropriate for the reasons set forth above.

C. BASE FUEL COST AND RATES

Allen Rooks, DESC Manager of Regulation, testified on DESC's currently approved electrical fuel cost factors, as well as DESC's base fuel cost for both the Review and Forecast Periods. Witness Rooks' Exhibit AWR-1 provided a summary of the Company's actual and projected base fuel component costs. This exhibit shows the actual base fuel under-collected balance to be \$115,854,473 at December 31, 2021, and the projected under-collected balance to be \$74,309,944 at the end of April 2022, which reflects the application of adjustments that DESC is proposing in this proceeding. (Transcript, p. 254.4, line 14 – p. 254.5, line 3; Hearing Exhibit 3).

Rooks also referenced that his calculations reflect the settlement and bankruptcy proceeds DESC received which DESC proposes using to decrease fuel cost recovery:

My Exhibits -1 and -2 present the detailed calculations of actual and projected base fuel costs and recovery for the

period January 1st, 2021, through April 30th, 2023. These calculations include \$65,930,934 received from the monetization of a settlement agreement with Toshiba Corporation and proceeds received from the Westinghouse Electric Company, LLC, bankruptcy proceeding. The company proposes to use these proceeds to adjust its undercollected fuel costs during the relevant period, and these adjustments translate to a \$3 reduction per month in DESC's current 1,000 kilowatt-hour residential bill.

(Transcript, p. 251, lines 1-11). Witness Rooks offered fifteen (15) exhibits as part of his testimony showing DESC's calculations of its fuel costs. Rooks testified that DESC is proposing that Variable Environmental & Avoided Capacity Cost Components be increased for all classes of customers for the period May 2022- April 2023; that DER Avoided Cost components be slightly decreased for Residential, Small, and Large General Service customer classes, and slightly increased for the Medium General Service customer class. (Transcript, p. 254.18, lines 4-17; Hearing Exhibit No. 3 (AWR-11)). In conclusion, Rooks testified to the increase in charges as a result of his calculations in this Docket:

If approved, the total fuel cost factors per kilowatt-hour by retail customer class would be 3.173 cents per kilowatt-hour for Residential, 3.148 cents per kilowatt-hour for Small General Service, 3.136 cents per kilowatt-hour for Medium General Service, 3.093 cents per kilowatt-hour for Large General Service, and 3.032 cents per kilowatt-hour for Lighting.

The monthly per-account DER incremental charge by retail class would be \$1 for Residential customers, \$6.82 for Small and Medium General Service customers, and \$100 for Large General Service customers.

The impact of the company's combined Spring '22 proposals for fuel and DSM, if approved, would be an increase of \$7.40 from current rates on an average monthly bill for a residential customer using 1,000 kilowatt-hours.

(Transcript, p. 252, lines 7-22).

Witness Rooks testified that the Company's proposed Total Fuel Cost factors per kWh, as shown in Exhibit AWR-10 (Hearing Exhibit 3), are as follows:

Class	Base Fuel Cost Component (cents/kWh)	Variable Environment al & Avoided Capacity Cost Component (cents/kWh)	DER Avoided Cost Component (cents/kWh)	Total Fuel Cost Factor (cents/kWh)
Residential	3.032	0.101	0.040	3.173
Small General Svc.	3.032	0.084	0.032	3.148
Medium General Svc.	3.032	0.074	0.030	3.136
Large General Svc.	3.032	0.044	0.017	3.093
Lighting	3.032	--	--	3.032

Rooks testified regarding use of the settlement and bankruptcy proceeding funds to offset the increase:

[W]e had a substantial increase that was going to come before the Commission here, and deploying those monies right now for the benefit of our customers, we just felt like that was the thing to do, and that's what — that's the proposal we're bringing to the . . . Commission here today.

(Transcript, p. 277, lines 4-10).

Finally, Rooks testified to the customer assistance programs available to DESC customers:

LIHEAP, or the Low-Income Home Energy Assistance Program, which is administered by the South Carolina Office of Economic Opportunity; we have EnergyShare, which is funded by Dominion Energy shareholders and also administered by the South Carolina Office of Economic Opportunity; we have the company's Good Neighbor Fund, which is funded by employee and retiree contributions; and

then there's a South Carolina Stay Plus Program, which is administered by the South Carolina Housing Authority; and a South Carolina Homeowners Rescue Program, which is also administered by the Housing Authority.

And I just wanted to say that, you know, per — per a call that I was on last week, we understand that there's more than \$300 million in funding available to help those customers who are struggling to pay their bills right now. So I would encourage customers, you know, out there right now, if they're listening, if they're watching, if they're struggling, to call us.

(Transcript, p. 282, lines 2-20).

In addition to the per kWh factors shown above, the Company is also proposing to increase its DER Incremental Cost Component (F_{IC}) per account per month to \$6.82 for Small/Medium General Service customers. The per account per month fee of \$1.00 for Residential and \$100.00 for Large General Service customers will remain unchanged to comply with the DER Program Act caps. (Transcript, p. 254.16, lines 1–5). The impact of the Company's proposed total fuel cost factor on a 1,000 kWh monthly residential electric customer bill is an increase of \$6.53, or 5.19%, inclusive of revenue tax. ORS Witness Anthony D. Briseno testified to “the scope of ORS's examination of Dominion Energy South Carolina's books and records as they pertain to the company's operation of the Fuel Adjustment Clause in the current filing and to present the results of ORS's examination” (Transcript, p. 307, lines 1-5). Briseno testified ORS agreed, after examination and verification, with DESC's calculations:

ORS examined and verified the monthly over- and under recovery calculations and balances as recorded by the company for the 12-month review period that ended December 2021. My direct testimony also explains the eight

exhibits that I sponsored for this hearing, detailing those calculations. Based on ORS's review, ORS agrees with the balances and the adjustments as put forth by the company for the 12-month review period that ended December of 2021.

(Transcript, p. 307, lines 6-14).

No party challenged DESC's proposed base fuel component. Witness Seaman-Huynh recommended that DESC provide a forecast to all interested parties of the expected fuel factor to be set at its next annual fuel proceeding based upon its historical (over)/under recovery to date and forecasts of prices for uranium, natural gas, coal, oil and other fuel required for the generation of electricity. Additionally, the forecast would provide the expected DER Program Charge to be set at DESC's next annual fuel proceeding based upon DESC's historical (over)/under-recovery to date and DESC's forecast of DER Program incremental and avoided costs. ORS recommends these forecasts be provided on a quarterly basis after DESC's new fuel rates are effective for the quarters ending June 30 and September 30, 2022. Both DESC Witness Briseno and ORS Witness Seaman-Huynh are in agreement with DESC's base fuel component. SACE/SCCCL did not present any testimony regarding DESC's proposed base fuel component. The Commission analysis of the evidence reveals that:

- (1) DESC's proposed fuel rates would increase residential bills of the typical consumer using 1,000 kWh by \$6.53, or 5.19%, compared to current rates;
- (2) DESC's base fuel component is just and reasonable and consistent with the requirements of S.C. Code Ann. § 58-27-865.

Based upon the evidence and the testimony of the witnesses, the Commission finds the proposed fuel rates would increase residential bills of the typical consumer using 1,000

kWh by \$6.53, or 5.19%, compared to current rates; further, the Commission finds DESC's Base Fuel Component is just and reasonable and consistent with S.C. Code Ann. § 58-27-865.

D. DISTRIBUTED ENERGY RESOURCES

DESC Witness Mark C. Furtick testified to the “performance and costs associated with the company’s Distributed Energy Resources Programs during the review period of January 1, 2021, through December 31, 2021, and provides the DER [Program] cost projections for the forecast period of January 1, 2022, through April 30, 2023.” (Transcript, p. 134, lines 12-17). Furtick asserted: “. . . the balance of DER Program Costs at the end of the Review Period totaled \$1,206,003 in avoided costs and \$8,193,729 in incremental costs. For the Period January 1, 2022, through April 30, 2023, the Company projects that DER Program Costs will include \$9,872,994 in avoided costs and \$28,580,103 in incremental costs.” (Transcript, p. 138.3, lines 15-19).

As to utility-scale DER Programs goals, Furtick testified nine (9) solar farms had been interconnected to DESC as of the end of 2017, indicating “DESC has achieved the 1% goal” of Act 236.” (Transcript, p. 138.5, line 19-p. 138.6, line 2). Regarding customer-scale goals, DESC advised the Commission in 2019 “it had achieved the 2.0% NEM threshold and that it had not accepted NEM applications submitted after May 3, 2019.” (Transcript, p. 138.7, lines 2-4).

Witness Furtick stated 12,234 DESC customers participated in NEM by the end of 2021, compared to 11,133 customers as of the end of 2020. (Transcript, p. 138.7, lines 17-19). Furtick testified “[t]o accomplish its customer-scale DER goals, the company offered

its non-residential customers the Bill Credit Program and also offered residential and non-residential customers a new retail net energy metering program, NEM 2.0.” (Transcript, p. 136, lines 1-5).

Furthermore, he noted 108 customers participated in the bill credit agreement as of the end of 2021, and the company offered a performance based incentive. (Transcript p. 138.8, line 6-p. 138.9, line 2). Witness Furtick stated: “DESC has achieved the 1% goal for Customer-scale facilities set forth in Act 236.” (Transcript, p. 138.9, lines 8-9).

Finally, Witness Furtick testified that DESC, as part of its community solar program, has customer accounts showing participation in community solar facilities. (Transcript, p. 138.9, line 11 – p.138.10, line 11).

DESC Witness Allen W. Rooks testified regarding DESC’s “currently approved electric fuel factors, actual and projected data on base fuel costs, variable environmental and avoided capacity costs, and distributed energy resource avoided and incremental costs and collection” for the review period and proposed costs for “May 2022 through April 2023.” (Transcript, p. 250, lines 15-25). Witness Rooks further stated that the proposed DER avoided costs component would result in a “slight decrease for the Residential, Small, and Large General Service customer classes, and a slight increase for the Medium General Service customer class.” (Transcript, p. 254.15, lines 9-13.). Witness Rooks testified that, as shown in Hearing Exhibit No. 3 (AWR-7), the Company is recommending the following DER Avoided Cost components for the period May 2022 through April 2023:

- 0.40 cents per kWh for the Residential rate class;
- 0.32 cents per kWh for the Small General Service rate class;

- 0.30 cents per kWh for the Medium General Service rate class; and
- 0.17 cents per kWh for the Large General Service rate class.

(Hearing Exhibit No. 3 (AWR-6)). Witness Rooks testified that, as reflected in Hearing Exhibit No. 3 (AWR-9), the Company's DER Program Incremental Costs by class should be: \$1.00 per account per month for the Residential rate class; \$6.82 per account per month for the Small/Medium General Service rate class; and \$100.00 per account per month for the Large General Service rate class. See, Hearing Exhibit No. 3 (AWR-11).

Witness Furtick also testified regarding DER. Furtick stated that based upon his experience and opinion, DESC has achieved the utility-scale and customer-scale goals as prescribed by S.C. Code Ann. § 58-39-130 (2015). As of December 31, 2017, DESC has nine solar farms totaling 48.16 MW interconnected to DESC's distribution system as part of the Company's approved DER Program. (Transcript, p. 138.5, l. 19). DESC also has 12,234 customers participating in its customer-scale DER Programs as of December 31, 2021, providing approximately 100.98 MW of solar generating capacity on the Company's system. (Transcript, p. 138.7, lines 17 – p. 138.8, line 4).

ORS Witness Gretchen Pool testified regarding the review by ORS of DESC's DER Program costs. (Transcript, p. 312.2, lines 16-20). Pool explained that the statutory provisions of Sections 58-39-130 and 140 allow DESC to recover its payments for electricity "provided under the DER [Program] that are paid at avoided cost rates or rates negotiated pursuant to [PURPA], whichever is lower" (Transcript, p. 312.3, lines 6-18). Witness Pool further testified that the Company's DER Program calculations comply

with Act No. 236 of 2014 and Commission Orders, and that the Company's calculations support DESC's proposed DER Program charges. (Transcript, p. 312.3 – p. 312.7).

Witness Pool stated ORS found DESC's actual DER Program avoided and incremental costs were reasonably and prudently incurred in implementing DESC's DER Program. (Transcript, p. 312.4, lines 15-18). Pool noted DESC made three adjustments to its DER Program incremental costs in this Docket. (Transcript, p. 312.5, lines 17-18). Pool determined in her review of the updated components of value for NEM distributed energy resources, it was her opinion the components were "in compliance with [Commission orders]. (Transcript, p. 312.6, lines 15-17). In addition, Pool asserted DESC "used the methodology approved in Commission Order No. 2015-194 to calculate the NEM incentive." (Transcript, p. 312.8, lines 1-2). Finally, Witness Pool noted DESC used the VIC approved recently by the Commission, resulting in "a reduction in purchased power fuel costs" (*Id.*, lines 11-16).

SACE/SCCCL did not present testimony regarding DESC's DER Programs during the Review Period.

Having reviewed the evidence and testimony of the witnesses, the Commission finds that DESC offered DER Programs and met its statutorily designated goals as set by Section 58-39-130. The Commission further finds DESC's DER Programs, and the associated costs, are just and reasonable.

V. FINDINGS OF FACT

After careful review and consideration of all of the evidence in the record, the Commission makes the following findings of fact:

1. The fuel purchasing practices and policies, power plant operations, fuel inventory management, and other matters associated with Section 58-27-865 are reasonable and prudent for the review period.

2. DESC's Avoided Energy Cost component calculation is reasonable and appropriate based on the evidence contained in the record.

3. DESC's rationale for delaying implementation of the temporal and seasonal data for avoided energy costs in order to sync with the temporal and seasonal period for T&D avoided cost as described in the Company's T&D Plan is reasonable.

4. The Commission finds that DESC's avoided capacity calculations are consistent with the requirement of Order No. 2021-569 and that such calculations are just and reasonable.

5. A zero value for environmental costs is reasonable and appropriate.

6. A zero value for hedging is reasonable.

7. The total value of Net Energy Metering Distributed Energy Resource (NEM DER) proposed by DESC and concurred to by ORS is \$ 0.03093 for the current period and \$0.04248 for 20-year levelized as shown in Direct Testimony of Witness James W. Neely and Table 2 in his testimony is reasonable and appropriate.

8. The Base Fuel Cost for DESC is 3.032 cents per kWh for all rate classes.

9. The Variable Environmental & Avoided Capacity Cost Component is 0.101 cents per kWh for Residential Service; 0.084 cents per kWh for Small General Service; 0.074 cents per kWh for Medium General Service; and 0.044 cents per kWh for Large General Service.

10. The DER Avoided Cost Component is 0.040 cents per kWh for Residential Service; 0.032 cents per kWh for Small General Service; 0.030 cents per kWh for Medium General Service; and 0.017 cents per kWh for Large General Service.

11. The Total Fuel Cost Factor 3.173 cents per kWh for Residential Service; 3.148 cents per kWh for Small General Service; 3.136 cents per kWh for Medium General Service; 3.093 cents per kWh for Large General Service; and 3.032 cents per kWh for Lighting Service.

12. The DER Incremental Cost Component per account per month is: \$1.00 for Residential; \$6.82 for Small/Medium General Service; and \$100.00 for Large General Service.

13. The total allowable rate change, reflecting all updated fuel costs incurred by DESC, for a Residential Customer using 1,000 kWh per month would be \$6.53, inclusive of taxes.

14. The Commission finds that the Company's recommendations for the value of NEM Distributed Energy Resources are reasonable.

15. DESC should provide a forecast to all interested parties of the expected fuel factor to be set at its next annual fuel proceeding based upon its historical (over)/under recovery to date and forecasts of prices for uranium, natural gas, coal, oil and other fuel required for the generation of electricity because the forecast would provide the expected DER Program Charge to be set at DESC's next annual fuel proceeding based upon DESC's historical (over)/under-recovery to date and DESC's forecast of DER Program incremental and avoided costs.

16. The Commission agreed with ORS's recommendation that these forecasts should be provided on a quarterly basis after DESC's new fuel rates are effective for the quarters ending June 30 and September 30, 2022.

17. The Commission finds the proposed fuel rates would increase residential bills of the typical consumer using 1,000 kWh by \$6.53, or 5.19%, compared to current rates.

18. The Commission finds DESC's Base Fuel Component is just and reasonable and consistent with S.C. Code Ann. § 58-27-865 (2015).

19. The Commission finds the evidence presented indicates that the DESC offered DER Programs met the statutorily designated goals as set by Section 58-39-130 of the South Carolina Code of Laws.

20. The Commission further finds DESC's DER Programs, and the associated costs, are just and reasonable.

21. We find it is just and reasonable for DESC to send notice, with explanation, to its customers regarding the increase in fuel costs established in this order. This same notice shall provide information regarding resources available to customers in need of assistance.

VI. CONCLUSIONS OF LAW

1. The fuel purchasing practices and policies, power plant operations, and fuel inventory management of DESC, are just and reasonable pursuant to Section 58-27-865 of the South Carolina Code of Laws (2015).

2. The proposed fuel cost adjustments of DESC are just and reasonable pursuant to Sections 58-27-865 and 58-39-140.

3. The Company's revisions to the Renewable Net Metering Rider RNM tariff sheet, attached hereto as Order Exhibit 1, are just and reasonable, and shall become effective for service rendered during the Billing Period.

4. The Commission concludes that DESC's Avoided Energy Cost component calculation is reasonable and appropriate based on the evidence contained in the record.

5. We further conclude that DESC's rationale for delaying implementing the temporal and seasonal data for avoided energy costs in order to sync with the temporal and seasonal period for T&D avoided cost as described in the Company's T&D Plan is reasonable.

6. The Commission concludes that DESC's avoided capacity calculations are consistent with the requirement of Order No. 2021-569 and that such calculations are just and reasonable.

7. We conclude that a zero value for environmental costs is reasonable.

8. We conclude that a zero value for hedging is reasonable.

9. The total value of NEM Distributed Energy Resources proposed values listed in Table 2 of DESC Witness Neely's testimony comply with the NEM methodology approved in Order Nos. 2015-194 and 2021-569, properly evaluate the categories of potential costs or benefits to DESC's system, and satisfy the requirements of Sections 58-40-10 and 20 of the South Carolina Code of Laws.

Table 2
Total Value of NEM Distributed Energy Resources (\$/kWh)
Proposed Values

	Current Period (\$/kWh)	20-Year Levelized (\$/kWh)	Components
1	\$0.03024	\$0.03878	Avoided Energy Costs
2	\$0.00000	\$0.00034	Avoided Capacity Costs
3	\$0.00000	\$0.00000	Ancillary Services
4	\$0.00000	\$0.001838	T & D Capacity
5	\$0.0000004	\$0.0000002	Avoided Criteria Pollutants
6	\$0.00000	\$0.00000	Avoided CO ₂ Emission Cost
7	\$0.00000	\$0.00000	Fuel Hedge
8	(\$0.00180)	(\$0.00180)	Utility Integration & Interconnection Costs
9	\$0.00000	\$0.00000	Utility Administration Costs
10	\$0.00015	\$0.00011	Environmental Costs
11	\$0.02860	\$0.03928	Subtotal
12	\$0.00234	\$0.003208	Line Losses @ 0.9245
13	\$0.03093	\$0.04248	Total Value of NEM Distributed Energy Resources

10. DESC's distributed energy resource programs offered during the review period of year 2021 were reasonable and complied with Commission Order Nos. 2015-194, 2015-512, and 2021-569.

11. DESC's proposed monthly per kWh DER Avoided Cost Components by class are just and reasonable.

12. DESC's proposed monthly per account DER Incremental Cost Components by class are just and reasonable.

13. It is reasonable for DESC to provide a forecast to all interested parties of the expected fuel factor to be set at its next annual fuel proceeding based upon its historical (over)/under recovery to date and forecasts of prices for uranium, natural gas, coal, oil and

other fuel required for the generation of electricity. The forecast would provide the expected DER Program Charge to be set at DESC's next annual fuel proceeding based upon DESC's historical (over)/under-recovery to date and DESC's forecast of DER Program incremental and avoided costs. The Commission agreed with ORS's recommendation that these forecasts by DESC shall be provided on a quarterly basis after DESC's new fuel rates are effective for the quarters ending June 30 and September 30, 2022. The forecasts shall be filed in this Docket and served upon all parties of record and available for any interested stakeholder.

VII. ORDERING PROVISIONS

IT IS THEREFORE ORDERED THAT:

1. The fuel purchasing practices and policies, power plant operations, and fuel inventory management practices of Dominion Energy South Carolina, Inc., were reasonable for the review period, January 1, 2021, through December 31, 2021.

2. With regard to ongoing plant outages that are not complete as of the end of the Review Period, or plant outages where final reports or investigations (whether conducted by DESC, contractor, government entities or otherwise) were not available at the time of the hearing on this matter, the reasonableness of such outages shall be subject to review by the Commission and by ORS in the subsequent review period where such plant outages are complete and/or when such report(s) become available.

3. The Company's revisions to the Renewable Net Metering Rider RNM tariff sheet, attached hereto as Order Exhibit 1, are just and reasonable, and shall become effective for service rendered during the Billing Period.

4. The components of value for NEM Distributed Energy Resources as shown in Table 2 in the direct testimony of DESC Witness James W. Neely comply with the NEM methodology approved by the Commission in Order Nos. 2015-194 and 2021-569, properly evaluate and/or quantify all categories of potential costs or benefits to DESC's system, and are approved.

**Total Value of NEM Distributed Energy Resources (\$/kWh)
Approved Values**

	Current Period (\$/kWh)	20-Year Levelized (\$/kWh)	Components
1	\$0.03024	\$0.03878	Avoided Energy Costs
2	\$0.00000	\$0.00034	Avoided Capacity Costs
3	\$0.00000	\$0.00000	Ancillary Services
4	\$0.00000	\$0.001838	T & D Capacity
5	\$0.0000004	\$0.0000002	Avoided Criteria Pollutants
6	\$0.00000	\$0.00000	Avoided CO ₂ Emission Cost
7	\$0.00000	\$0.00000	Fuel Hedge
8	(\$0.00180)	(\$0.00180)	Utility Integration & Interconnection Costs
9	\$0.00000	\$0.00000	Utility Administration Costs
10	\$0.00015	\$0.00011	Environmental Costs
11	\$0.02860	\$0.03928	Subtotal
12	\$0.00234	\$0.003208	Line Losses @ 0.9245
13	\$0.03093	\$0.04248	Total Value of NEM Distributed Energy Resources

5. The monthly DER Avoided Cost Components by class are approved for DESC bills rendered on, during, and after its first billing cycle in May 2022.

6. DESC's proposed monthly per account DER Incremental Cost Components by class are approved for DESC bills rendered on, during, and after its first billing cycle in May 2022.

Customer Class	DERP Incremental Cost Component (per Account per Month)
Residential	\$1.00
Small & Medium General Service	\$6.82
Large General Service	\$100.00

7. DESC shall establish its Base Fuel Cost Component, Variable Environmental & Avoided Capacity Cost Components and Total Fuel Cost Factors based upon the findings in this order, and these amounts shall be effective for use in DESC bills rendered on and after the first billing cycle of May 2022.

Class	Base Fuel Cost Component (cents/kWh)	Variable Environmental & Avoided Capacity Cost Component (cents/kWh)	DER Avoided Cost Component (cents/kWh)	Total Fuel Cost Factor (cents/kWh)
Residential	3.032	0.101	0.040	3.173
Small General Svc.	3.032	0.084	0.032	3.148
Medium General Svc.	3.032	0.074	0.030	3.136
Large General Svc.	3.032	0.044	0.017	3.093
Lighting	3.032	--	--	3.032

8. DESC shall send a notice, with explanation, to its customers regarding the increase in fuel costs established in this Order. This same notice shall provide information regarding resources available to customers in need of assistance.

9. DESC shall file with the Commission the tariff sheets and rate schedules approved by this Order, and all other retail tariff sheets, within ten (10) days of receipt of this Order and shall serve copies on all Parties. The fuel rates reflected in each tariff sheet shall be consistent with the components and factors set forth in this Order. DESC shall

electronically file the revised tariffs in a text-searchable PDF format and copy via electronic mail to etariff@psc.sc.gov to be included in the Commission's Electronic Tariff system. DESC shall provide a reconciliation of each tariff rate change approved in this Order to each tariff rate revision filed in the Electronic Tariff system. Such reconciliation shall include an explanation of any differences and DESC shall submit this information separately from DESC's Electronic Tariff filing. DESC shall reference this Order and its effective date at the bottom of each page of each tariff sheet.

10. DESC shall comply with the notice requirements set forth in Section 58-27-865(B).

11. DESC shall continue to file its monthly reports as previously required.

12. DESC shall account monthly to the Commission and to ORS for the differences between the recovery of fuel costs through base rates and the actual fuel costs experienced by booking the difference to revenues with a corresponding deferred debit or credit. ORS shall monitor the cumulative recovery amount.

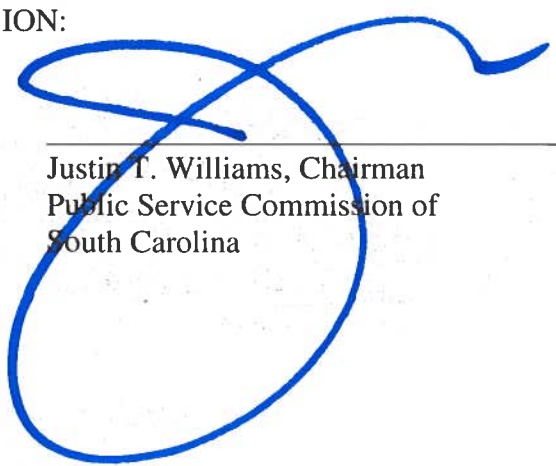
13. DESC shall submit monthly reports of fuel costs and scheduled and unscheduled outages of generating units with a capacity of 100 megawatts or greater to the Commission and to ORS.

14. DESC shall submit a forecast to all interested parties of the expected fuel factor to be set at its next annual fuel proceeding based upon its historical (over)/under recovery to date and forecasts of prices for uranium, natural gas, coal, oil and other fuel required for the generation of electricity. The forecast must provide the expected DER Program Charge to be set at DESC's next annual fuel proceeding based upon DESC's

historical (over)/under-recovery to date and DESC's forecast of DER Program incremental and avoided costs. The Commission agrees with ORS's recommendation and orders that these forecasts by DESC shall be provided on a quarterly basis after DESC's new fuel rates are effective for the quarters ending June 30 and September 30, 2022. The forecasts shall be filed in this Docket and served upon all parties of record and available for any interested stakeholder.

15. This Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:



Justin T. Williams, Chairman
Public Service Commission of
South Carolina

RIDER TO RETAIL RATES**THIRD NET ENERGY METERING FOR
RENEWABLE ENERGY FACILITIES ("NEM")**
(Page 1 of 4)**AVAILABILITY**

This rider is available in conjunction with the Company's Retail Electric Service Rates, for a Customer-Generator who applies for NEM service from May 17, 2019, through May 31, 2021. The customer's generating system must be manufactured, installed and operated in accordance with governmental and industry standards and must fully conform with the Company's current interconnection standards as approved by the Public Service Commission of South Carolina.

CHARACTER OF SERVICE

The applicable character of service is specific to the rate schedule that the customer receives service under.

RATE PER MONTH

The applicable rate per month shall be from the appropriate rate schedule as referenced in the availability section above. The monthly bill shall be determined as follows:

For electric service under a time-of-use rate schedule:

1. The basic facilities charge shall be determined and billed as set forth in the applicable rate schedule as described in the Availability section above.
2. Any demand charges shall be determined and billed as set forth in the applicable rate schedule as described in the Availability section above.
3. If a customer-generator's energy consumption exceeds the electricity provided by the customer-generator during a monthly billing period, the customer-generator shall be billed in kWh for the net electricity supplied by the Utility.

If a customer-generator's energy generation exceeds the electricity provided by the Utility during a monthly billing period, the customer-generator shall be credited for the excess kWh generated during that billing period.

Energy charges (or credits) shall be based on the rates in the applicable rate schedules as described in the availability section above. For on-peak energy, the customer's monthly usage amount in kilowatt-hours shall be reduced by the total of (a) any on-peak excess energy delivered to the Company in the current month plus (b) any accumulated on-peak excess energy balance remaining from prior months. Total on-peak energy in kilowatt-hours billed to customers shall never be less than zero. For off-peak energy, the customer's monthly usage shall be reduced by the total of (a) any off-peak excess energy delivered to the Company in the current month plus (b) any accumulated off-peak excess energy balance remaining from prior months plus (c) any accumulated on-peak excess energy balance from the current month or prior months that was not used to reduce on-peak usage. Total off-peak energy in kilowatt-hours billed to customers shall also never be less than zero. For any billing month during which excess energy exceeds the customer's usage in total, producing a net credit, the respective energy charges for the billing month shall be zero. Any excess energy credits shall carry forward on the following month's bill by first applying excess on-peak kWh against on-peak kWh charges and excess off-peak kWh against off-peak kWh charges, then applying any remaining on-peak kWh against any remaining off-peak kWh charges. Credits shall not offset the basic facilities charge or the demand charge for the applicable rate schedule.

4. Excess energy not used in the current billing month to reduce billed kWh usage shall be accumulated and used to reduce usage in future months. For all affected billing statements rendered during November billing cycles, any accumulated excess energy not used to reduce billed kWh usage shall be paid to the customer-generator at the Company's avoided cost, zeroing out the customer generator's account of excess energy. The avoided cost is the off-peak winter energy credit as approved in the Company's Rate PR-1, Small Power Production and Cogeneration schedule.

Order Exhibit 1
Docket No. 2022-2-E - Order No. 2022-290
April 28, 2022
Page 1 of 4

RIDER TO RETAIL RATES

THIRD NET ENERGY METERING FOR
RENEWABLE ENERGY FACILITIES ("NEM")
(Page 2 of 4)

For electric service under a standard, non time-of-use rate schedule:

1. The basic facilities charge shall be determined and billed as set forth in the applicable rate schedule as described in the Availability section above.
2. Any demand charges shall be determined and billed as set forth in the applicable rate schedule as described in the Availability section above.
3. If a customer-generator's energy consumption exceeds the electricity provided by the customer-generator during a monthly billing period, the customer-generator shall be billed in kWh for the net electricity supplied by the Utility.

If a customer-generator's energy generation exceeds the electricity provided by the Utility during a monthly billing period, the customer-generator shall be credited for the excess kWh generated during that billing period.

Energy charges (or credits) shall be based on the rates in the applicable rate schedules as described in the availability section above. For purposes of calculating monthly energy, the customer's usage shall be reduced by the total of (a) any excess energy delivered to the Company in the current month plus (b) any accumulated excess energy balance remaining from prior months. Total energy in kilowatt-hours billed to customers shall never be less than zero. For any billing month during which excess energy exceeds the customer's usage in total, producing a net credit, the respective energy charges for the billing month shall be zero. Credits shall not offset the basic facilities charge or the demand charge for the applicable rate schedule.

4. Excess energy not used in the current billing month to reduce billed kWh usage shall be accumulated and used to reduce usage in future months. For all affected billing statements rendered during November billing cycles, any accumulated excess energy not used to reduce billed kWh usage shall be paid to the customer-generator at the Company's avoided cost, zeroing out the customer generator's account of excess energy. The avoided cost is the off-peak winter energy credit as approved in the Company's Rate PR-1, Small Power Production and Cogeneration schedule.

MINIMUM CHARGE

The monthly minimum charge shall be the basic facilities charge plus the demand charge, if any, as stated in the applicable rate.

DEFINITIONS

1. Customer-Generator means the owner, operator, lessee, or customer-generator lessee of an electric energy generation unit which:
 - (A) generates or discharges electricity from a Renewable Energy Resource, including an energy storage device configured to receive electrical charge solely from an onsite Renewable Energy Resource;
 - (B) has an electrical generating system with a capacity of:
 - (i) not more than the lesser of one thousand kilowatts (1,000 kW AC) or one hundred percent (100%) of contract demand if a non-residential customer; or
 - (ii) not more than twenty kilowatts (20 kW AC) if a residential customer;
 - (C) is located on a single premises owned, operated, leased, or otherwise controlled by the customer;
 - (D) is interconnected and operates in parallel phase and synchronization with an electrical utility and complies with the applicable interconnection standards;
 - (E) is intended primarily to offset part or all of the customer-generator's own electrical energy requirements; and
 - (F) meets all applicable safety, performance, interconnection, and reliability standards established by the commission, the National Electrical Code, the National Electrical Safety Code, the Institute of Electrical and Electronics Engineers, Underwriters Laboratories, the federal Energy Regulatory Commission, and any local governing authorities.
2. Renewable Energy Resource means solar photovoltaic and solar thermal resources, wind resources, hydroelectric resources, geothermal resources, tidal and wave energy resources, recycling resources, hydrogen fuel derived from renewable resources, combined heat and power derived from renewable resources, and biomass resources.

RIDER TO RETAIL RATES

THIRD NET ENERGY METERING FOR
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3. Retail Electric Service Rates shall mean Rates 1, 2, 3, 5, 6, 7, 8, 9 (metered), 11, 12, 13, 14, 16, 20, 21, 21A, 22, 23, 24, and 28.
4. Excess energy delivered to the Company shall be defined as energy produced by the customer's renewable energy generating facility that exceeds the energy delivered by the Company during a given time period. This excess energy shall be used to reduce energy delivered and billed by the Company during the current or a future month, as provided in the Rate Per Month section above.
5. The On-Peak and Off-Peak periods shall be defined in the applicable time-of-use rate schedules.

GENERAL PROVISIONS

1. To qualify for this rider, the customer must first qualify for and be served on one of the rate schedules as described in the availability section above. The customer must also meet all other qualifications as outlined in the availability section above.
2. All provisions of the applicable rate schedules described above including, but not limited to Billing Demand, Determination of On- and Off-Peak Hours, Adjustment for Fuel Costs, Demand Side Management Component, Pension Costs Component, Storm Damage Component, Sales and Franchise Tax, Payment Terms, and Special Provisions will apply to service supplied under this rider.
3. Customers electing service under this NEM Rider are eligible to remain on the Rider until May 31, 2029, or until such time as the customer elects to terminate service under the Rider, whichever occurs first. The rates set forth here are subject to Commission Order No. 2015-194 in Docket No. 2014-246-E. Eligibility for this rate will terminate as set forth in Order No. 2015-194. The value of distributed energy resource generation shall be computed using the methodology contained in Commission Order No. 2015-194 in Docket No. 2014-246-E and updated coincident in time with each avoided cost proceeding conducted pursuant to S.C. Code Ann. § 58-41-20(A). The value beginning on, during, and after the first billing cycle of May 2022 is \$0.04248 per kWh.
4. Service on this NEM Rider will be closed to new participants as of June 1, 2021.
5. When no contract demand level is available for a non-residential customer, connected load as determined by the Company shall be used as a proxy for contract demand when determining the capacity of the electrical generating system.
6. Customers who apply for NEM service after May 31, 2021, will receive service in accordance with the NEM tariff in effect at the time at which the customer requests NEM service.
7. Customers served under this rider are not eligible for the Company's Small Power Production, Cogeneration Rate PR-1.
8. The customer must execute an application to interconnect generation and an interconnection agreement prior to receiving service under this rider.
9. The Company will retain ownership of Renewable Energy Credits ("RECs").
10. In the event the Company determines that it is necessary to increase the capacity of facilities beyond those required to serve the Customer's electrical requirement or to install a dedicated transformer or other equipment to protect the safety and adequacy of electric service provided to other customers, the Customer shall pay the estimated cost of the required transformer or other equipment above the estimated cost which Company would otherwise have normally incurred to serve the Customer's electrical requirement, in advance of receiving service under this Rider.

RIDER TO RETAIL RATES**THIRD NET ENERGY METERING FOR
RENEWABLE ENERGY FACILITIES ("NEM")**
(Page 4 of 4)**SPECIAL PROVISIONS**

The Company will furnish service in accordance with its standard specifications. Non-standard service will be furnished only when the customer pays the difference in costs between non-standard service and standard service or pays to the Company its normal monthly facility charge based on such difference in costs.

METERING REQUIREMENTS

Customer must furnish, install, own, and maintain a meter socket to measure 100% of the Customer's generator output and that is connected on the Customer's side of the delivery point. Company will furnish, install, own, and maintain a generation meter. Company will also furnish, install, own and maintain a bi-directional billing meter to measure the kWh delivered from Company to Customer and to measure kWh received from Customer by Company. The billing meter will be configured for demand and/or time-of-use measurement as required by the applicable rate. All metering shall be at a location that is approved by the Company. At Company's sole option, the generator meter requirement may be waived for customers served under a net metering rider on or before December 31, 2015.

TERM OF CONTRACT

Contracts shall be for a period not to exceed the term of the contract under which the customer currently receives electric service. There shall be a separate contract for each meter at each location.

GENERAL TERMS AND CONDITIONS

The Company's General Terms and Conditions are incorporated by reference and are part of this rider.